In The Claims:

1. (Original) A method for controlling an automotive vehicle having a plurality of wheels comprising:

determining a yaw rate;

determining a lateral acceleration;

determining a roll rate;

determining longitudinal acceleration;

determining a calculated angle relative to the vehicle;

generating a wheel lift signal or a wheel grounded signal as a function of yaw rate, lateral acceleration, roll rate and longitudinal acceleration;

adjusting the calculated angle in response to the wheel lift or wheel grounded signal; and

controlling a safety system in response to the calculated vehicle angle.

2. (Original) A method as recited in claim 1 wherein determining a calculated angle comprising determining the calculated vehicle angle in response to the roll rate signal.

3. (Original) A method as recited in claim 1 wherein the calculated angle comprises a wheel departure angle.

4. (Original) A method as recited in claim 1 wherein the calculated angle comprises a reference bank angle.

5. (Original) A method as recited in claim 1 wherein the calculated angle comprises a relative roll angle.

6. (Original) A method as recited in claim 1 further comprising determining a pitch acceleration and, wherein generating wheel lift or wheel grounded signal comprises determining wheel lift or wheel grounded signal as a function of yaw rate, lateral acceleration, roll rate, longitudinal acceleration and pitch acceleration.

7. (Original) A method as recited in claim 1 further comprising controlling the safety system to counteract wheel lift.

8. (Original) A method as recited in claim 1 wherein generating a wheel lift signal is performed in response to a two wheel averaging method.

9. (Currently Amended) A method of operating a control system for an automotive vehicle comprising:

detecting a wheel grounded condition; and

adjusting [[the]] a reference bank angle toward [[the]] a linear bank angle in response to the wheel grounded condition.

10. (Original) A method as recited in claim 9 wherein adjusting comprises adjusting the reference bank angle to the linear bank angle.

11. (Original) A method as recited in claim 9 wherein adjusting comprises incrementally adjusting the reference bank angle to the linear bank angle.

12. (Original) A method as recited in claim 9 wherein detecting a wheel grounded condition comprises detecting an absolutely grounded condition.

13. (Original) A method as recited in claim 9 further comprising determining a yaw rate;

determining a lateral acceleration;

determining a roll rate;

determining longitudinal acceleration;

wherein determining a wheel grounded condition comprises determining a wheel grounded condition in response to the lateral acceleration, the roll rate, the yaw rate and the longitudinal acceleration.

14. (Currently Amended) A method of operating a control system for an automotive vehicle comprising:

detecting a wheel grounded condition; and

setting a wheel departure angle to about zero in response to the ~~absolutely~~ wheel grounded condition.

15. (Currently Amended) A method as recited in claim 14 wherein detecting that a wheel grounded condition comprises detecting a front inside wheel, and a rear inside wheel are absolutely grounded.

16. (Currently Amended) A method as recited in claim 14 wherein detecting a wheel grounded condition comprises detecting that a front outside wheel, and a rear outside wheel are absolutely grounded or possibly grounded.

17. (Original) A method as recited in claim 14 wherein detecting a wheel grounded condition comprises detecting a front inside wheel and a front outside wheel is absolutely grounded or possibly grounded, or a rear inside wheel is absolutely grounded and a rear outside wheel is absolutely grounded or possibly grounded.

18. (Original) A method as recited in claim 14 further comprising determining a calculated steering angle, wherein setting a wheel departure angle to about zero comprises setting a wheel departure angle to about zero in response to the calculated steering angle.

19. (Original) A method as recited in claim 14 further comprising adjusting the roll signal for control in response to the wheel departure angle after setting the wheel departure to about zero.

20. (Original) A method as recited in claim 14 further comprising setting the wheel departure angle to about zero in response to a transition maneuver.

21. (Original) A method as recited in claim 14 further comprising determining a yaw rate;

determining a lateral acceleration;

determining a roll rate;

determining longitudinal acceleration;

wherein determining a wheel grounded condition comprises determining a wheel grounded condition in response to the lateral acceleration, the roll rate, yaw rate and longitudinal acceleration.

22. (Currently Amended) A method of operating a control system for a vehicle comprising:

determining a wheel lift condition; and

adjusting [[the]] a roll signal for control in response to the ~~absolutely lifted~~ wheel lift condition.

23. (Original) A method as recited in claim 22 wherein the roll signal for control is a function of a reference bank angle, adjusting the roll signal for control comprises adjusting a reference bank angle.

24. (Original) A method as recited in claim 22 wherein adjusting a reference bank angle comprises subtracting a wheel departure angle from the reference bank angle.

25. (Original) A method as recited in claim 24 wherein the step of subtracting is performed when a front inside wheel is absolutely lifted or a rear inside wheel is absolutely lifted.

26. (Original) A method as recited in claim 22 wherein adjusting a reference bank angle comprises subtracting a wheel departure angle and a relative roll angle from the reference bank angle.

27. (Original) A method as recited in claim 22 wherein adjusting a reference bank angle comprises subtracting a wheel departure angle and a relative roll angle increased by a factor from the reference bank angle.

28. (Original) A method as recited in claim 22 wherein the step of subtracting is performed when a front inside wheel is absolutely lifted and a rear inside wheel is absolutely lifted.

29. (Original) A method as recited in claim 22 further comprising determining a yaw rate;

determining a lateral acceleration;

determining a roll rate;

determining longitudinal acceleration;

wherein determining a wheel lift condition comprises determining a wheel lift condition in response to the lateral acceleration, the roll rate, yaw rate and longitudinal acceleration.

30. (Currently Amended) A method of operating a control system for a vehicle comprising:

determining a front inside wheel lift state;

determining a rear inside wheel lift state;

when the front inside wheel lift state is lifted and the rear inside wheel lift state is not grounded or the rear wheel lift state is lifted and the front inside wheel lift state is not grounded, calculating a wheel departure angle.

31. (Currently Amended) A method as recited in claim 30 wherein the front inside wheel lift state being lifted is an absolutely lifted state.

32. (Currently Amended) A method as recited in claim 30 wherein the rear wheel lift state being lifted ~~grounded~~ is an absolutely ~~grounded~~ lifted state.

33. (Original) A method of operating a control system for a vehicle;

providing a first wheel lift detection method;

providing a second wheel lift detection method;

determining a vehicle configuration or setting; and

switching between the first wheel lift detection method and second wheel lift detection method in response to the vehicle configuration or setting.